SECTION 26 56 19.10

COMMERCIAL LED EXTERIOR LIGHTING

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\*\* NOTE TO SPECIFIER \*\* Haven Lighting; LED Exterior Lighting products.
This section is based on the products of Haven Lighting, which is located at:2691 Circleport Dr, Suite AErlanger, KY 41018Tel: 513-655-2468Email: [request info (info@havenhomelighting.com)](https://arcat.com/rfi?action=email&company=Haven%252BLighting&message=RE%253A%2520Spec%2520Question%2520(16521hlg)%253A%2520&coid=53908&spec=16521hlg&rep=&fax=)
Web: <https://havenlighting.com>
 [ [Click Here](https://arcat.com/company/haven-lighting-53908) ] for additional information.
Haven Lighting combines cutting-edge technology with timeless design to offer premium landscape lighting solutions that elevate any space. With a commitment to innovation and quality, our collection includes color-changing outdoor lights, Christmas landscape lights, smart landscape lighting transformers, outdoor home lighting, and commercial outdoor lighting, which are all designed to captivate. Whether for the home, office building, or outdoor oasis, Haven Lighting promises to exceed expectations, providing versatility and sophistication in every illumination.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. LED lighting fixtures and control systems.
			1. Linear lights.
				1. X Series Classic.
				2. X Series Evolution.
				3. Accessories.
			2. Up and down lights.
				1. 9 Series Aluminum.
				2. 9 Series Brass.
				3. 9 Series Pro Brass.
				4. Adjustable White, Aluminum.
				5. Adjustable White, Brass.
			3. Controllers.
				1. X Series.
				2. 9 Series.
			4. Transformers.
				1. 9 Series, Smart.
				2. Stratus with App Control.
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 26 05 19 - Low-Voltage Electrical Power Conductors and Cables.
		2. Section 26 05 23 - Control-Voltage Electrical Power Cables.
		3. Section 26 27 16 - Electrical Cabinets and Enclosures.
		4. Section 26 09 43 - Network Lighting Controls.
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00.
		2. Product Data:
			1. Manufacturer's data sheets on each product to be used.
			2. Preparation instructions and recommendations.
			3. Storage and handling requirements and recommendations.
			4. Typical installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each type, size, pattern, and color.
		2. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum of five years documented experience.
		2. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.
		3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

\*\* NOTE TO SPECIFIER \*\* Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
			1. The intent of a mock-up is to demonstrate quality of workmanship and visual appearance.
			2. If the mock-up is not acceptable, rebuild the mock-up until satisfactory results are achieved.
			3. Retain mock-up during construction as a standard for comparison with completed work.
			4. Do not alter or remove mock-up until work is completed or removal is authorized.
	1. PRE-INSTALLATION CONFERENCE
		1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.
	2. DELIVERY, STORAGE, AND HANDLING
		1. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
		2. Protect from damage due to weather, excessive temperature, and construction operations.
	3. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
	4. WARRANT
		1. Manufacturer's standard limited warranty unless indicated otherwise.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Haven Lighting, which is located at:2691 Circleport Dr, Suite AErlanger, KY 41018Tel: 513-655-2468Email: [request info (info@havenhomelighting.com)](https://arcat.com/rfi?action=email&company=Haven%252BLighting&message=RE%253A%2520Spec%2520Question%2520(16521hlg)%253A%2520&coid=53908&spec=16521hlg&rep=&fax=);Web: <https://havenlighting.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with the provisions of Section 01 60 00.
	1. PERFORMANCE AND DESIGN REQUIREMENTS
		1. Standards Compliance:
			1. Regulatory Requirements: Products or components listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction and marked for intended location and application.
			2. Luminaires conforming to UL1598.

\*\* NOTE TO SPECIFIER \*\* Delete article not required.

* 1. LINEAR LIGHTS - X SERIES LED LIGHTS
		1. X Series Classic Lights.
			1. Comes with a male and female connector for quick installation.
			2. Overcurrent Protection: Fused at Receiver.
			3. Input Voltage: 24VDC.
			4. IP Rating: IP66.
			5. Controller Compatibility: XCONT240.
			6. First Light on Channel Must Use: XRCR1 or XRCR2.
			7. Housing Color: XXX (1013 = Oyster White, 9005 = Jet Black).
			8. X Series Classic LED Light Models:
				1. X Series Classic XRT72-XXXX.

Length: 6 feet (1.9 m).

1 inch (25.40 mm) Lights are every 9 inches (228.60 mm).

Max Power (VA): 9.6W.

* + - * 1. X Series Classic XRT36-XXXX.

Length: 3 feet (1 m).

1 inch (25.40 mm) Lights every 9 inches (228.60 mm).

Max Power (VA): 4.8W.

* + - * 1. X Series Classic XRT09-XXXX.

Length: 9 inches (228.60 mm).

1 inch (25.40 mm) Light in middle section.

Max Power (VA): 1.2W.

* + - * 1. X Series Classic XRT05-XXXX - 5 inches (127 mm) Light.

Length: 5 inches (127 mm) (light at end).

Max Power (VA): 1.2W.

Light section is 1 inch (25.40 mm) With 4 inches (101.60 mm) of cover and includes a 4 inches (101.60 mm) spacer.

Comes with 5 male in/female out and 5 male out/female in.

* + 1. X Series Evolution Lights.
			1. Comes with a male and female connector for quick installation.
			2. Overcurrent Protection: Fused at Receiver.
			3. Input Voltage: 24VDC.
			4. IP Rating: IP66.
			5. Controller Compatibility: XCONT240.
			6. First Light on Channel Must Use: XRCR1 or XRCR2.
			7. Housing Color: XXX (1013 = Oyster White, 9005 = Jet Black).
			8. X Series Evolution LED Light Models.
				1. X Series Evolution XRL72-XXXX.

Length: 6 feet (1.9 m).

Max Power (VA): 86.4W.

* + - * 1. X Series Evolution XRL36-XXXX.

Length: 3 feet (1 m).

Max Power (VA): 43.2W.

* + - * 1. X Series Evolution XRL12-XXXX.

Length: 12 inches (304.80 mm).

Max Power (VA): 14.4W.

* + - * 1. X Series Evolution XRL03-XXXX.

Length: 3 inches (76.20 mm).

Max Power (VA): 3.6W.

* + 1. Accessories.
			1. X Series Data Receiver with 1 Cable Entry.
				1. Locate within 3 foot of first light on a channel.
				2. Made for XPCWIRE (power and communication wire) input.
				3. Output quick connects to the first light.
	1. UP AND DOWN LIGHTS
		1. Features:
			1. Integrated LEDs that are easily replaceable without removing the fixtures.
			2. Vertical tilt up to 270 degrees.
			3. Haven Lighting Anti-moisture connections.
			4. Brightness: 10 Levels.
			5. Full Color Options: 20 Colors.
			6. Classic White Color Temperature: 8 Temperatures.
			7. Transformer: 9 Series required (sold separately).
		2. 9 Series Aluminum Up and Down Light Specifications:
			1. Features:
				1. Overcurrent Protection: Internal Fuse.
				2. Input Voltage: 10-15VAC.
				3. Communications: Over Power Wire.
				4. IP Rating: IP66.
				5. Compatible with: 9TR300W, 9TR150W.
			2. 9 Series 9FAU36W Full Color 3 inches (76.20 mm) Aluminum LED Up Lights.
				1. Max Power (VA): 7W.
				2. Light Output Power: 6W.
			3. 9 Series 9FAU410W Full Color 4 inches (101.60 mm) Aluminum LED Up Lights.
				1. Max Power (VA): 13W.
				2. Light Output Power: 10W.
			4. 9 Series 9FAU514W Full Color 5 inches (127 mm) Aluminum LED Up Lights.
				1. Max Power (VA): 18W.
				2. Light Output Power: 14W.
		3. 9 Series Brass Up Light Specifications:
			1. Features:
				1. Overcurrent Protection: Internal Fuse.
				2. Input Voltage: 10-15VAC.
				3. IP Rating: IP54.
				4. Communications: Over Power Wire.
				5. Compatible with: 9TR300W, 9TR150W.
			2. 9 Series 9FBU36W Full Color 3 inches (76.20 mm) Brass LED Up Light.
				1. Max Power (VA): 7W.
				2. Light Output Power: 6W.
			3. 9 Series 9FBU410W Full Color 4 inches (101.60 mm) Brass LED Up Lights.
				1. Max Power (VA): 13W.
				2. Light Output Power: 10W.
			4. 9 Series 9FBU514W Full Color 5 inches (127 mm) Brass LED Up Lights.
				1. Max Power (VA): 18W.
				2. Light Output Power: 14W.
		4. 9 Series Pro Brass Up Light Specifications:
			1. Features:
				1. Overcurrent Protection: Internal Fuse.
				2. Input Voltage: 10-15VAC.
				3. IP Rating: IP54.
				4. Communications: Over Power Wire.
				5. Compatible with: 9PTR300W, 9PTR150W.
			2. 9 Series 9PBU36W Full Color 3 inches (76.20 mm) Brass LED Up Light.
				1. Max Power (VA): 7W.
				2. Light Output Power: 6W.
			3. 9 Series 9PBU410W Full Color 4 inches (101.60 mm) Brass LED Up Lights.
				1. Max Power (VA): 13W.
				2. Light Output Power: 10W.
			4. 9 Series 9PBU514W Full Color 5 inches (127 mm) Brass LED Up Lights.
				1. Max Power (VA): 18W.
				2. Light Output Power: 14W.
		5. Adjustable White LED Lights.
			1. Adjustable color temperature, brightness, and lens angle.
			2. Voltage: 12-15V AC.
			3. Wattage: 6W.
			4. Max. Voltage: 15V AC.
			5. Brightness: 3 Levels (2W, 4W and 6W).
			6. Lumens: 690.
			7. Classic White Color Temperature: 2700K, 3000K, 4000K (selectable).
			8. Transformer: Stratus (sold separately).
			9. Adjustable White LED Lights Models:
				1. Adjustable White 6SAU36W 3 inches (76.20 mm) Aluminum LED Up Lights.
				2. Adjustable White 6SBU36W 3 inches (76.20 mm) Brass LED Up Lights.
	2. CONTROLLERS
		1. X Series Indoor/Outdoor Controllers XCONT240.
			1. Power: 240W.
			2. Input Voltage: 120VAC.
			3. Input Current: 2.6 Amps.
			4. Output Voltage: 24 VDC.
			5. Output Current Fused: 10 Amps.
			6. Channel Output Current Fused: 7.5 Amps.
			7. IP Rating: IP55.
			8. Number of Output Channels: 4.
			9. Hard Wired Ethernet: Yes.
			10. Ghz Wifi: Yes.
		2. 9 Series Controllers:
			1. Features:
				1. Input Surge Protection: Yes.
				2. Input Voltage: 120VAC.
				3. Output Voltage: 15 VAC.
				4. Output Current Protection: Circuit Breaker.
				5. IP Rating: IP44.
				6. Number of Wire Connections: 6.
				7. 2.4 Ghz Wifi: Yes.
			2. 9 Series 9TR300W Controller.
				1. Power: 300W.
				2. Input Current: 2.6 Amps.
			3. 9 Series 9TR150W Controller.
				1. Power: 150 W.
				2. Input Current: 1.3 Amps.
	3. TRANSFORMERS
		1. 9 Series 9TRXXXW, Smart Transformer.
			1. Works exclusively with our 9 Series WiFi enabled line of landscape lighting and the Haven smartphone app.
			2. mounted indoor or outdoor for easy installation.
			3. Transformer plugs into a regular outdoor wall outlet and contains a toroidal core that offers cooler and quieter performance.
			4. Voltage: 120V AC.
			5. Power: 150W, 300W.
			6. Output Voltage: 15V AC.
		2. Stratus 6STRXXXW with App Control.
			1. Low voltage landscape lighting transformer.
			2. Simple scheduling of turning lights on and off with the Haven app.
			3. Includes time adjustment feature, including adjusting for Daylight Savings Time.

\*\* NOTE TO SPECIFIER \*\* 4, Voltage: 120V AC.

* + - 1. Power Options: 150W, 300W.
			2. Output Voltage: 15V AC.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until the substrates have been properly constructed and prepared.
		2. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
	3. INSTALLATION
		1. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.
	4. FIELD QUALITY CONTROL
		1. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

\*\* NOTE TO SPECIFIER \*\* Include if manufacturer provides field quality control with onsite personnel for instruction or supervision of product installation, application, erection, or construction. Delete if not required.

* + 1. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.
	1. CLEANING AND PROTECTION
		1. Clean products in accordance with the manufacturers recommendations.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION